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TOWARD MODERNIZATION OF THE MERCHANT MARINE

By

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CHAPTER I

INTRODUCTION

There is no single industry more important to the economic welfare and world influence of a nation, both in times of peace and war, than its shipping industry. Shipping has played an important role in the development of the United States. With independence, the influence of the maritime advocates was apparent. One of the first Acts of Congress passed in 1789, contained a maritime flavor which established discriminatory taxes and duties against foreign ships engaged in commerce with the new nation, the United States.¹ Additional legislation which still remains in effect, followed which established cabotage and documentary restrictions. Thus, from the beginning, the United States Government has taken an active role in the maritime affairs of the nation in the belief that a strong merchant marine must be capable of responding to the needs of national security and is essential for economic prosperity and national prestige.

In the compact, modern world, merchant shipping and national security are more closely related than ever before. By its very nature, shipping spans the nearly three-fourths of the world that is covered by water. Not only does shipping provide access to

¹Military Sea Transport Service p. 1.

sources of vital materials and resources, but it also provides the secure means of safeguarding a nation's war-making potential and its ability to project that potential to the war fronts of the world. In both World War I and World War II the United States were found short in merchant shipping because it had relied too heavily upon foreign owned and operated ships to carry its import and export trade.

As clear as this importance may seem, the nation's maritime history is in a state of decline. Voices from all segments of the American scene appeal to those responsible for the nation's welfare to improve the states of the merchant marine. The matter is discussed almost daily in the newspapers, in the magazines, and in the halls of Congress, but the decline of the merchant marine continues. This is a problem of large dimensions that is worthy of investigation.

The purpose of this paper is to examine the nature and causes of the decline in the merchant marine, and the consequences of this decline on national security as well as economic position in the free world. Further, the interest of this study is to survey methods by which the merchant marine might be revitalized and modernized.

The study does not include domestic merchant marine operations including coastal trade and trade solely associated with the Great Lakes and the inland waterways. Quantitative data referred to in the paper includes information only thru fiscal year 1965. This measure was considered necessary because of the temporary nature of

the impact on the shipping industry resulting from the Vietnam build up throughout fiscal year 1966.

Chapter II will review the history and background of American ocean shipping including the effects of significant legislation, on subsidies and flags of convenience shipping.

Chapter III will discuss the existing need for a merchant marine from the point of view of national security in time of war and economic progress in peace time. Also included is a review of the existence and need for the National Defense Reserve Fleet and the Military Sea Transport Service.

Chapter IV will examine the current state of health of the merchant marine with respect to its present quantity and quality of equipment, participation in United States foreign trade.

Chapter V will explore the impact of technology, recent government and industry studies into the existing problems in the immensely complex merchant marines, and to the extent possible, the future trends affecting the industry.

Chapter VI will summarize Chapter II thru V and state the conclusion and recommendations as the manner which might best serve to revitalize and modernize the merchant marine as a responsive, efficient and effective segment of United States industry.

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CHAPTER II

HISTORY AND BACKGROUND OF AMERICAN OCEAN SHIPPING

Background to World War I

The early history of our country is tied very closely to the sea. The original colonies were dependent upon sea transport, and as a result healthy shipping and shipbuilding industries sprang into existence almost from the start. The early Americans' inheritance of capital, science, skilled labor, and technological advances from Europe were responsible for the colonies' early and rapid economic growth. Tobacco, cotton, rice, lumber, and fur all found a welcome and lucrative market in Europe. By 1775, colonial trade with England accounted for thirty-three percent of the Mother Country's total trade.¹

The shipbuilding industry of the United States was a healthy maritime asset by 1776 and consisted of small shipyards from Maine to Georgia. The skilled craftsmen were abundant, and the best timber available for production of ships.² The best double-decked

¹Carl E. McDowell and Helen M. Gibbs, Ocean Transportation, (New York: McGraw Hill, 1954), p. 17.

²Ibid., p. 20.

American ships could be produced at about \$34 per ton while Great Britain's costs were \$55 per ton or over.¹

During the Revolutionary War, the British Navy sunk or captured nearly one thousand American ships, virtually destroying the shipping and commerce industry in this new nation.²

In 1789, Congress passed a law which limited American registration to only those ships built in the United States, and owned by United States citizens. This law was aimed at protecting American ship builders. Congress also helped American ship operators by granting sizeable reductions in customs on goods imported on United States ships.³

After 1790, United States shipping found the United States flag in every port where ingenuity could secure access and trading ability could secure profits. The tonnage registered for foreign trade increased from 124,000 tons in 1790 to 981,000 tons in 1810. Imports and exports transported in United States ships increased during this period; imports from about 18 per cent and exports from 30 per cent to 90 per cent. During this period from 1800 to 1840 nearly 90 per cent of all United States imports and exports were transported in United States ships. These golden days saw a relatively new nation rise second only to England in sea tonnage transported.⁴

¹Ibid., p. 21.

²Paul M. Zeis, American Shipping Policy, (Princeton: Princeton University Press, 1938), p. 1-3.

³Ibid.

⁴Industrial Union of Marine and Shipbuilding Workers, U.S. Government Assistance to the Merchant Marine, 1954, p. 8.

Capital for further expansion of the merchant fleet was drawn away from the sea during the mid-nineteenth century. England developed the iron steamship while the United States Clipper ship-builders were complacent and reluctant to change.¹ By 1860, nearly all passengers and mail were carried by foreign ships, the great majority of which were iron screw vessels.² In spite of efforts to keep the merchant fleet active in foreign trade, there was a decline in United States shipping for the next 50 years. United States ships transported nearly 90 percent of the nation's seaborne foreign trade during the first half of the nineteenth century. By 1870, this percentage had declined to nearly 36 percent. Trade further declined to about 9 percent in 1910. These years saw a new eclipse by the United States merchant fleet in foreign trade at a time when the nation's total wealth increased many fold.³

World War I

The eve of World War I found the United States almost completely unprepared to meet the emergency ahead. The United States witnessed a sudden crisis when the ships of the other countries were withdrawn and pressed into war service.⁴ Exports to Europe almost ceased and United States warehouses filled to over-capacity with cargo waiting export and American exporters were at a point

¹Robert R. Russel A History of the American Economic System (New York: Appleton-Century-Crofts, 1964), p. 152.

²McDowell and Gibbs, p. 29.

³U.S. Maritime Commission, Handbook of Merchant Marine Development and Regulation in the United States, (Washington: Government Printing Office, 1940), p. 177.

⁴U.S. Bureau of Naval Personnel, Military Sea Transport Service (U.S. Government Printing Office, 1962), pp. 2-3.

of desperation.¹ Freight rates had increased as much as one thousand percent. Operators were gladly buying ships for \$300 per ton that could have been purchased for \$60 per ton before the outbreak of war.

The great increases in shipping rates brought about pressures for government to move in. Congress passed legislation permitting American owners of foreign-flag ships to register them in the United States, employ them in United States foreign trade, and sail with the original crew regardless of nationality. These transfers totaled 650,000 tons by 1917.

The Shipping Act of 1916.

The next significant legislation affecting the Merchant Marine was the Shipping Act of 1916. This Act provided for the establishment of a naval auxiliary, a naval reserve and a merchant marine for the purpose of meeting the requirements of the country's commercial and military needs. These needs had formerly been partially served by ships of foreign nations, however, World War I had brought on a shortage that foreign flags could no longer fulfill.

§ The United Shipping Board was created by this Act. The Shipping Board was authorized to form the Emergency Fleet Corporation for the purchase, construction, lease, charter, and operation of merchant ships. As a result of the efforts of this corporation,

¹Zeis, p. 81.

²Military Sea Transport Service. p. 3.

2,318 merchant ships were built from 1918 to 1922. However, most of these ships were not delivered in time to respond to the needs of the war.¹

The Act did not in itself grant federal aid for the construction and operation of private ships, but it did promote an emergency shipbuilding program. The Act further served in a regulatory nature in establishing a code of shipping.

The Merchant Marine Act of 1920

After cessation of World War I hostilities, another major problem confronted the country; that of disposing of a merchant fleet which had grown in excess of the nation's postwar requirements. The Merchant Marine Act of 1920² was enacted to deal with this disposal problem. It authorized the United States Postmaster General to negotiate and contract for the carrying of mail over such lines and at such prices as might be agreed upon by the United States Shipping Board and the Postmaster General. This Act also provided the establishment of services employing government-owned ships and their ultimate transfer to private ownership; the selling of ships; the establishment of essential trade routes; the repair and operation of ships under certain conditions; and the granting of loans for the construction of new ships from funds obtained from the sale of old government ships.

¹McDowell and Gibbs, op. cit., p. 253-254.

²U.S. Statutes at Large, Vol. 41, Part I, p. 588.

There was little incentive for ship construction since the operators could purchase ships from the government's emergency fleet at attractive prices, (\$99 per deadweight ton in 1920 reduced to \$30 per ton in 1921). Between 1922 and 1928, not a single ship was constructed in the United States for transoceanic service.¹

One of the interests of this Act was to provide the basis for a more permanent peacetime shipping policy. In actual practice some inadequacies became apparent. The contracts were lax and were abused by both government and private operators. The government aid provided was just enough to become a permanent expense and not enough to produce the strong Merchant Marine that was desired.²

The Merchant Marine Act of 1928

Because of the results of the 1920 Act, the United States Congress passed the Merchant Marine Act of 1928.³ Salient features of this Act were the increased realism in the determination of the need for and designation of ocean-mail routes and increased compensation to the ship operators for services rendered. This new legislation resulted in the negotiation of contracts with thirty-one steamship companies.⁴

¹McDowell and Gibbs, p. 257.

²McDowell and Gibbs, op. cit., p. 255.

³U. S. Statutes at Large, Vol. 45, Part I, p. 689.

⁴McDowell and Gibbs, op. cit., p. 256.

This Act increased the size of the revolving fund which the 1920 Act had authorized for ship construction loans. The ocean-mail contract conditions called for replacement of old tonnage and decreased rates of interest for construction loans. The ship replacement program began moving. Under the provisions of this Act thirty-one new ships were constructed and forty-one old ships were modernized.¹

This Act was an improvement over the previous legislation. However, it had several defects which were summarized by the Magnuson Committee in its 1950 report:

First, the compensation granted American lines was not based upon actual conditions encountered on the particular route served, so that some lines got more than they needed, while others competing with subsidized foreign companies were given too little aid.

Second, the ship replacement provisions were somewhat too laxly enforced. Third, loans for ship-building were made at varying rates, so that lucky lines got money at almost nominal interest charges, while others paid several times as much, creating an element of unfairness. This, however, was not due to favoritism, but to legal interpretation of a carelessly worded section of the Act. . . .

Fourth, there was inadequate supervision over the use to which subsidy money was put by the lines, officers or one or two companies paying themselves huge bonuses and dividends when their companies were almost going bankrupt. Fifth, there was a complaint that, in violation of law, contracts were so worded that public bidding was frustrated and only a predetermined line could comply.²

¹Ibid., pp. 256-257.

²Merchant Marine Study and Investigation! S. Report 2494, 81st Cong. 2d Sess. (Washington, D.C.: Government Printing Office, 1950), p. 109.

The Merchant Marine Act of 1936

Title I of this Act was a declaration of policy and stated:

It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a merchant marine (a) sufficient to carry its domestic water-borne commerce and a substantial portion of the water-borne export and import foreign commerce of the United States and to provide shipping service on all routes essential for maintained the flow of such domestic and foreign water-borne commerce at all times, (b) capable of serving as a naval and military auxiliary in time of war or national emergency, (c) owned and operated under the United States flag by citizens of the United States insofar as may be practicable, and (d) composed of the best-equipped, safest, and most suitable types of vessels, constructed in the United States and manned with a trained and efficient citizen personnel. It is hereby declared to be the policy of the United States to foster the development and encourage the maintenance of such a merchant marine.¹

The United States is today, still operating under the basic policy described above. In order to comply with this policy, subsidies are paid for the construction and operation of ships built in the United States and operated under the United States flag on essential foreign trade routes. These subsidies are designed to compensate the operators for the higher United States building and operating needs.

A Federal regulatory agency (United States Maritime Commission) was created by this Act. Congress provided that the Commission be responsible for carrying out the purposes of the Act through the following:

a. Construction-differential subsidies on vessels built in the United States for use on essential foreign trade routes.

¹U.S. Statues at Large, Vol. 49, Part I, p. 1985.

b. Operating-differential subsidies on vessels, utilized on essential foreign trade routes.

c. Financial aid in the construction of vessels, either with or without construction-differential subsidies, by deferment of a portion of the purchase price (granting loans).

d. Applying an allowance of credit to the purchase price of new vessels for obsolete vessels taken in exchange.

e. Restrictions on the sale or use of vessels owned or acquired by the Commission.

f. Payment for national-defense features incorporated in the vessels.

g. Low interest rates on construction loans.

h. Establishment of reserve funds with attendant income tax benefits to the vessel operators.

i. Construction of vessels for chartering to private operators.

j. Additional subsidies to offset the effect of Government aid paid to foreign competitors.

k. Guarantee of ship mortgages.

l. Training of citizens to serve on American merchant vessels.

m. Prescribing of minimum manning scales, minimum wage scales, and minimum working conditions for all officers and crews employed on vessels receiving an operating-differential subsidy, and other benefits to American Seamen.

n. Authority to requisition or purchase vessels when advisable for the security of the national defense or during national emergencies.¹

Legislation After the Merchant Marine Act of 1936

The Merchant Marine Act of 1936 contained a comprehensive program, which could result in an up-to-date and highly effective Merchant Marine. The United States Maritime Commission had little more than started on a long-range program which the Act had authorized when World War II started. At the peak of the war, there were 100 yards and 650,000 workers building merchant ships.

¹United States Comptroller General, Audit of Federal Maritime Board and Maritime Administration, Department of Commerce and Predecessor Agency, letter from Comptroller General of the United States, 82d Cong., 1st Sess., House Doc. 93 (Washington: Government Printing Office, 1951), pp. 111-112.

This was in addition to twelve private and eleven government yards building United States Navy ships. An ocean going vessel was launched at an average rate of one every six hours for four years. The shipbuilding program which the United States embarked upon to support the war effort produced 5,592 merchant ships. When the war ended, this large inventory of ships was far in excess of the country's needs. Therefore, new legislation was required which would authorize the sale of those ships considered to be in excess of the nation's military and commercial needs.¹

During the early stages of World War II it was apparent that some device was needed to allocate available shipping on an urgency of need. This requirement brought about the creation of the War Shipping Administration with broad powers to charter, purchase, operate, insure, repair, and requisition ships.² Together with the Army Transport Service; the Navy Transport Service and the Fleet Service Forces, the War Shipping Administration, through the Joint Transportation Committee under the Joint Chiefs of Staff, worked out the allocation of all shipping for the National Defense.³

Ninety-five percent of all cargo was carried by the merchant fleet, dry and liquid cargo shipments totaled: in 1942 -44,117,000 long tons; in 1943 - 62,113,000 long tons; in 1944 - 78,553,000 long tons; in 1945 - 83,460,000 long tons. During the last year

¹Military Sea Transport Service, 1922, p. 219.

²McDowell and Gibbs, p. 417.

³Military Sea Transport Service, 1962, p. 8.

of the war 9,000 tons were delivered every hour of every day.¹

The Merchant Ship Sales Act of 1946 prescribed procedures and prices for disposing of the Government-owned fleet of ships. Ship sales were authorized to citizens and non-citizens, with citizens being given preferential treatment. The 1946 Act established a firm pricing policy of fixed statutory prices by type of ship, making allowances for the cost of getting ships in condition, absence of standard features, the presence of desirable features, and normal depreciation. Minimum prices by ship type were established, and a 25 percent down payment was required with the balance to be carried by the Government at 3.5 percent interest.² The sale was ultimately terminated in 1951 by which time 581 dry-cargo ships and 266 tankers had been sold. The remaining ships were transferred permanently to the National Defense Reserve fleet.³

The start of the Korean conflict found the United States in a far better position for ocean shipping than any previous war. This was largely due to the huge inventory of leftover construction from World War II. The Maritime Administration (MARAD) had just come into existence, but lacked stature. The Military Sea Transport Service was formed two years earlier and had the authority and facilities to meet the challenge. In short, maritime shipping was never any real problem after the initial surge requirements normally peculiar to an unexpected outbreak of war.

¹Ibid., p. 4.

²U. S. Statutes at Large, Vol. 60, Part 1, p. 41.

³McDowell and Gibbs, p. 116.

The long-Range Shipping Act of 1952 provided for construction differential subsidies for all ships operated in the foreign trade of the United States. This legislation included tankers and tramps which had not been included in the 1936 Act. The 1952 Act also decreased the age requirement for trade-in allowance from 17 to 12 years, and broadened the availability of construction reserve funds for use in the reconstruction and reconditioning of ships, and provided for recomputation of the life expectancy of the reconstructed or modernized ship. This legislation was a decided step forward in overcoming the weakness of obsolescence which threatened the modern United States Merchant Marine.¹

Over the years, numerous minor amendments to the various Merchant Marine laws have been enacted. As the 86th Congress came to an end in 1960, several changes in shipping policy were enacted. Among the more important were:

1. An increase in the allowable construction-differential subsidy from 50 to 55 percent (meaning that now 55 percent of the cost of construction in United States shipyards can be paid by the Government if foreign cost studies show that foreign construction would be 45 percent or less of domestic construction cost).²

2. A ban was enacted against the use of ships in domestic trade which are modified by the use of major foreign-built components (this restriction goes into effect only for those modifications which were initialed prior to enactment, and aimed primarily at the use of foreign-constructed midbodies for use

¹U.S. Statutes at Large. Vol. 60. Part I, p. 760.

²Ibid., Vol. 74, Part I. p. 362.

in the dry-bulk cargo domestic trade).¹

3. Legislation was enacted in order to permit nonsubsidized operators to trade in their old tonnage for more efficient ships not in the reserve fleet.²

4. The useful life of subsidized ships was extended from 20 to 25 years for ships delivered after 1946.³

The Subsidy

The United States Merchant Marine has operated under various programs of government assistance or forms of subsidy from as early as 1845. These early subsidy programs failed at their primary objective of maintaining an adequate Merchant Marine.⁴

Initially, aid to shipping lines was accomplished through ocean-mail contracts which were authorized by Congress in 1845. Payments were made to four shipping companies for almost fifteen years, at which time the aid was withdrawn. Ocean-mail contracts were again authorized by Congress in 1864. The life of this Act was thirteen years. Another mail contract which lasted for nearly thirty years, was authorized by Congress in 1891.⁵

The success of the ocean-mail subsidies can be judge by their effects on United States shipping companies and upon the merchant fleet. Only one of the four subsidized companies which operated

¹Ibid., p. 321.

²Ibid., p. 312.

³Ibid., p. 216.

⁴McDowell and Gibbs, p. 247.

⁵Ibid., p. 249.

under the 1845 legislation managed to survive into the twentieth century. The other three folded when the Government subsidy was withdrawn in 1858. One subsidized shipping company managed to survive the withdrawal of the 1864 authorized subsidies, but only by entering into a ten year contract with Brazil. That company folded in 1893. The 1891 Act proved equally as useless. This is illustrated by the fact that by 1910 the proportion of the nation's foreign commerce carried in United States flag ships had dropped from its 1850 level of 73 percent to 8.7 percent in 1910.¹

The operating-differential subsidy payments are determined and stated as percentages of the subsidizable expenses of the ship operator. Separate rates are determined for each type of expense, each trade route, and take into consideration each foreign competitor. The process of calculating these rates is complex and requires a large amount of foreign cost information which must be obtained on a continuous basis. The only accurate source of such information is from the foreign flag operators who are the competitors of the United States subsidized operators. In most cases, these foreign operators are not willing to release their exact cost; therefore, the Maritime Administration is required to obtain this information from indirect sources and to make assumptions.²

There have been general increases in the subsidy differentials over the years. (See Table I) The greatest increase has been in

¹Ibid., p. 251.

²Ibid.

TABLE - I

OPERATING-DIFFERENTIAL SUBSIDIES
 JAN. 1, 1947 to JUNE 30, 1965
 (IN MILLIONS OF DOLLARS)

1937-1946	\$ 48.7	\$ 32.1	\$ 16.6
1947	13.4	10.2	3.2
1948	28.0	14.5	13.5
1949	44.2	14.5	29.6
1950	57.8	9.2	48.6
1951	71.9	25.7	46.1
1952	89.3	25.7	63.6
1953	106.2	12.9	93.3
1954	107.3	2.8	104.5
1955	115.1	11.9	103.1
1956	128.1	22.4	105.7
1957	147.7	25.3	122.4
1958	147.1	6.4	140.6
1959	159.5	14	159.1
1960	168.0	5.1	162.9
1961	171.7	1.9	169.7
1962	184.7	4.1	180.5
1963	192.2	-1.2	193.4
1964	208.7	1.2	207.5
1965	192.0	1.1	190.9
Total	\$2,330.5	\$195.4	\$2,135.0

Source: Maritime Administration Annual Report 1966.

the area of wages, which is the greatest single operating cost to both the ship operator and to the Government for those ships entitled to subsidy payments. The Government reimburses the operators for an average of seventy-two percent of the actual wages paid every crewman aboard a subsidized vessel.¹ Expressed another way, of the \$200-million annual direct operating subsidies paid out by the Government, eighty-three percent is allocated to shipboard wages.

Crews of ships registered under foreign flags operate at a lower wage rate than crews of United States ships. Some foreign ships are manned with mixed crews which consist of European officers and European and Asian seamen. Non-European seamen are paid lower wages than those paid to European seamen. Strong maritime unions in the United States have been instrumental in demanding and obtaining wages for United States seamen at rates far in excess of those paid to the seamen who man foreign ships.²

The construction-differential subsidy applies to ships that are to be used in the foreign commerce of the United States. The effect, again, is to equalize foreign and domestic shipbuilding costs. This subsidy places the United States operator on an equal

¹U.S. Department of Commerce, This is Marad (Washington: U.S. Government Printing Office 1965), p. 13.

²Panel on Wartime Use of the U.S. Merchant Marine., The Role of the U.S. Merchant Marine in National Security., (Washington: National Academy of Sciences -- National Research Council, 1959), p. 56.

There are other important means by which the government intervenes to aid the merchant marine, other than direct subsidies. The most important of these is by cargo preference. In 1904, a statute was passed requiring all military cargoes to be shipped in American flag ships.

In 1954, by Public Law 83,644, the Merchant Marine Act of 1936 was amended to provide for fifty percent of all the gross tonnage of government financed cargo being transported on ocean vessels to be carried on privately owned U.S. flag commercial vessels. This law includes cargoes generated by government agencies for:

- (a) supplies for U.S. armed forces overseas
- (b) military aid to allies
- (c) economic assistance cargoes under the Agency for International Development
- (d) shipments under Export-Import bank loans
- (e) Public Law 83-480, agricultural shipments

The cost of this indirect subsidy is the difference between U.S. ship rates and the world market rate. It has been estimated by the Maritime Administration as about \$80-million annually.¹

The "Flag of Convenience"

All United States Merchant Marine ships are not eligible to participate in the subsidy program. Legislation, policy, types of trade practices, and economic factors have led many United States ship owners to seek more advantageous environments in which to operate their ships. The result has been that many United States

¹This is Mared, P. 14.

basis with the foreign operator who builds his ships at lower cost in foreign yards.¹

The plans and specifications of ships contracted under this subsidy must receive approval of the Department of the Navy to insure the inclusion of national defense features. The cost of these features is paid for by the Government. The Merchant Marine Act of 1936 provides that the construction subsidy shall not exceed one-third the United States construction cost of the ship (excluding the national defense features).² In cases where the Federal Maritime Board possesses convincing evidence that the actual differential exceeds that percentage, it may grant an allowance not to exceed fifty-five percent. Since June, 1963, the construction subsidy allowance has averaged fifty-percent per ship. For the 14-18 merchant ships built annually, the government's contribution to the ship owners is currently averaging \$120-million per year.³

The construction-differential subsidy can be considered as an aid to the ship owner and as an aid to the United States shipbuilding industry, insuring that shipbuilding capability will be available in time of national emergency. This ability is dependent upon available shipyard facilities, experience ship-building personnel, and an adequate supply of materials and components.

¹Ibid., p. 51.

²Elmer A. Lewis, Laws Relating to Shipping and the Merchant Marine, (Washington, D.C.: Government Printing Office, 1956), p. 266.

³U.S. Naval Institute Proceedings, January 3, 1967, p. 75.

ship owners have registered their ships under foreign flags.¹ This shipping is registered under nine North Atlantic Treaty Organization (NATO) countries' flags as well as under the popularly termed "flags of convenience." The "flags of convenience" term applies primarily to United States-owned shipping which is registered under the flags of Panama, Liberia, and Honduras (PANLIBHON). Although shipping which is owned by United States citizens, and registered under any flag other than that of the United States is technically registered under a "flag of convenience," shipping that is registered with NATO allies, all of whom are traditionally maritime nations, are not under effective control of the United States. These NATO nations have agreed to commit the preponderance of their merchant fleet to a common pool in the event of a NATO war. However, no formal agreement exists for making this shipping available to the United States government in the case of a United States emergency.²

On the other hand, the United States citizen-owned portion of the PANLIBHON flag fleets is considered to be under effective control of the United States government because of the absence of operation control restrictions in the existing maritime laws of those three nations. In addition, the small shipping requirements of these three nations would create only a marginal requirement for shipping in the event of a war.³

¹The Role of the U.S. Merchant Marine In National Security, pp. 54-55.

²Ibid., p. 58.

³Boleslaw A. Boczek. Flags of Convenience (Cambridge, Mass: Cambridge University Press, 1962), pp. 288-290.

The composition of the United States controlled portion of the PANLIBHON flag fleet amounts to 443 ships of over 12.3 million deadweight tons.¹ About 300 of these PANLIBHON registered ships are tankers with deadweight tonnage amounting to nearly 8 million tons. The ships are employed in transporting the majority of the petroleum in United States foreign trade. Availability of this fleet of tankers combined with those now in service under the United States flag (plus those in moth balls) would make about 700 tankers available to the United States in time of an emergency. Additionally, the nearly 120 general cargo ships, the 80 odd dry-bulk carriers, about 15 reefers and nearly 10 passenger-cargo ships would add a significant contribution to the United States sealift capability.²

Attacks by maritime labor unions against "flags of convenience" operations and objections on the part of some of the United States' allies to the continued use of PANLIBHON flag fleets have been prevalent. These labor and foreign interests may normally be expected to continue their efforts toward the eventual elimination of this arrangement.³

Because of the increased difficulty of operating United States flag ships in direct competition with foreign-flag tankers, more and more United States oil companies are registering their tankers under foreign flags. McDowell and Gibbs explained reasons for this

¹U.S. Maritime Administration, Changing Patterns in U.S. Trade and Shipping Capacity, (Washington: U.S. Government Printing Office 1965) p. 10.

²The Role of the U.S. Merchant Marine in National Security, p. 34.

³Ibid., p. 56.

more than a decade ago when they wrote:

... (1) American operating costs are 25 percent greater than for a foreign-flag ship. (2) The cost of constructing tankers in this country is greater than in foreign shipyards and until mid-1952, tankers were excluded from the benefits of the construction differential subsidies provided for under the Merchant Marine Act of 1936. (3) Employment in the trade between foreign ports is not attractive to American seamen, who prefer to serve aboard vessels stopping at United States ports. (4) Difficulties involved in foreign exchange induce American oil companies to build ships abroad and to operate them under foreign registry.¹

Recent United States construction costs have been estimated to be at least twice as much as foreign ship construction costs. In addition, further increases in operating costs have occurred. For example, American seamen earn, on an average, well over \$3 an hour. This wage is four times as much as Japanese seamen wages.²

The attractiveness of operating under a foreign flag can be easily recognized by a look at the used-tanker market. "Marine Engineering/Log," in 1957, found that a T-2 tanker registered under the U.S. flag and that had passed survey in 1956, sold for \$3-million, while a foreign-flag T-2 of like condition was bringing a price of \$4-million. This was at the time of a relative world shortage of tankers.³

Another indication of such attractiveness is apparent when the outstanding orders are observed for United States shipping interest in foreign shipyards. For example, from the end of World War II to the period March, 1955, United States or affiliated interests had placed orders for 302 ships amounting to six million

¹McDowell and Gibbs, pp. 117-119.

²Forbes, June 15, 1965, p. 24-25.

³Marine Engineering/Log, March 1957, p. 11.

deadweight tons. During the next sixteen months, the cumulative orders from foreign shipbuilding yards grew to 534 ships, totaling over twelve million deadweight tons.¹

This important volume of shipbuilding business placed in foreign countries by United States interests far exceeded the total business contracted for with United States shipbuilders in the past World War II years. During the thirteen year period ending 31 December, 1960, United States shipyards completed 347 major merchant ships which totaled nearly eight million deadweight tons for government and private shipping interests. This amounted to slightly less than one-third of the total tonnage ordered from abroad by these same shipping interests in the post-war years.²

In summary, the United States has, since the early days of the Republic, displayed a sharp interest and very active hand in the Merchant Marine. Except for the first half of the 19th century, the Merchant Marine has found it necessary to rely on legislation to maintain its very existence.

The United States Merchant Marine for the past 100 years, has been experiencing an up-again, down-again state of financial well being. Further, despite the government subsidies, the United States entered both World Wars totally ill-prepared from a Merchant shipping capability view point. Finally, as a result of inadequate monetary incentives, a very significant portion of the post World War II shipping capacity has transferred its flag of registry to

¹Marine Engineering/Log, August 1956, p. 123.

²Marine Engineering/Log, May 1960, pp. 149, 173.

Investigation was made during the last quarter of 1934, and the results of this investigation are given in the report of the Committee on the Investigation of the Causes of the Depression, 1934.

The Committee on the Investigation of the Causes of the Depression, 1934, was organized in 1934, and its report was published in 1935. The Committee was organized by the President of the United States, and its members were chosen by the President.

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Panama, Honduras and Liberia in an effort to reduce high operating costs continuously associated with the United States flag Merchant Marine.

APPENDIX II

THE UNITED STATES MERCHANT MARINE

The very nature of the United States Merchant Marine is a complex mingling of international relations. The very essence of the United States Merchant Marine has been determined by the political and economic affairs of the world since 1914.

Many writers have shown and pointed out that the United States Merchant Marine is a very unique and a unique institution. It is a unique institution of influence in the sea world and the world in general. The total number of United States Merchant Marine vessels in 1944 is 3,000, carrying 100,000 tons of cargo and 100,000 passengers.

References

Various United States Government and United States Merchant Marine officials have shown and pointed out that the United States Merchant Marine is a unique institution. The total number of United States Merchant Marine vessels in 1944 is 3,000, carrying 100,000 tons of cargo and 100,000 passengers.

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CHAPTER III

WHY THE NEED FOR A MERCHANT FLEET

The very nature of the United States Merchant Marine is a complex grouping of interacting factors. Few can dispute history in that the powers that have dominated the political and economic affairs of the world have been seapowers.¹

Many writers have taken the position that seapower, in terms of a merchant marine, is a key element in a country's commercial policy of influence on its own economy and the economy of other nations.² The daily average of merchant ships at sea engaging in trade is 9,000, carrying 98.25 percent of the entire world's foreign trade.³

Peacetime Need

Perhaps the most important need for a merchant marine in time of peace is insurance of an existing capability for at least minimum support of both the nation's economy and the defense

¹McDowell and Gibbs, p. 30.

²Allen R. Ferguson, et al. The Economic Value of the United States Merchant Marine. (Evanston, Illinois., Northwestern University Press, 1961), p. 243.

³U.S. Congress House Committee on Merchant Marines and Fisheries, Operation Steel Pike I Hearings, (Washington: U.S. Government Printing Office, 1965), p. 13.

establishment at the onset of any war.¹

For many decades, the United States produced more raw materials than it consumed. Today, however, the United States has changed from a raw material surplus nation to a raw material deficit nation. As the world's largest trade nation, the United States funnels almost half of the world's output of raw materials thru its huge industrial complex.²

There are twenty-four essential strategic materials imported into the United States by sea. (see table II). It is interesting to note the United States imports eighty-six percent of its bauxite, essential in aluminum production and ninety percent of chromite, used to harden steel. Furthermore, the United States does not have a single domestic source for asbestos or tin,³ and crude oil and iron ore to satisfy our industrial needs are being imported at ever increasing rates.

In 1960, the United States imported 35.0 million tons (or 245 shiploads) of iron ore, and 372 million barrels (410 tankers loads) of crude oil. By 1975, the importation of iron ore will double and the import of crude oil will increase, the import-export trade is expected to keep pace with the higher Gross National Product in both dollar value and tonnage.²(see Table III) The United States' share of world shipping tonnage will slip from 8.5 percent in 1966, to 3.3 percent in 1985, if the United States continues its present policy.

¹Zeis, p. 214.

²Military Sea Transport Service, p. 5.

³Operation Steel Pike I Hearings, p. 109.

TABLE II - IMPORT OF ESSENTIAL RAW MATERIALS¹

	PERCENT OF NEED IMPORTED
Rubber (Natural)	100
Tin (Primary)	100
Fibers	100
Mica	98
Beryl	91
Chromite	90
Columbite-Tantalite	90
Manganese (Ore)	89
Bauxite	86
Thorium	80
Antimony	75
Asbestos	75
Cobalt	75
Sugar	68
Tungsten	68
Lead (Primary)	46
Zircon	41
Copper	39
Iron Ore	26
Uranium	24
Nickel	23
Vegetable Oils	15
Zinc (Primary)	15
Petroleum (Crude)	11

¹Military Sea Transport Service, p. 5.

TABLE III
 EXPECTED GROWTH OF THE ECONOMY
 AND EXPORTS AND IMPORTS¹

U. S. FLEET PRODUCTION AND PARTICIPATION ¹					
YEAR	GROSS NATIONAL PRODUCT	OCEAN-BORNE FOREIGN TRADE	MILLIONS OF LONG TONS	MILLIONS OF LONG TONS	PERCENT OF PARTICIPATION
1966	\$ 713 ²	\$30 ²	340	28.8	8.5
1975	880	40	470	20.9	4.5
1985	1,250	60	680	22.6	3.3

¹Based on continuation of present maritime policies.

²Dollars in billions.

¹U.S. Interagency Task Force on Maritime Policy. The Merchant Marine in National Defense and Trade (Washington 1965) p. 46-7 and Exhibit II, p. 3.

Finally, the third peactime need for a merchant fleet, is the insurance of the Country's ability to carry its own foreign trade when other dominant maritime nations become involved in a major conflict.¹

There are substantial domestic, economic benefits generated from the maritime industry, (including the merchant protion of the shipbuilding industry). The maritime industry generates annually about \$1.5-million in Gross National Products, pays about \$75-million in corporate taxes, and its members contribute about \$80-million in personnel income tax. In addition, shipping services by United States flag ships conserves about \$800-million in the balance of payments position of the United States.²

Wartime Need

Both by treaty and military assistance agreements, the United States is committed to the defense of approximately sixty nations throughout the free world. Strategic objectives dictate that we have a dry-cargo fleet to transport equipment and supplies, tankers to carry huge quantities of fuel and transports to move troops.³

The Korean conflict figures show that for every soldier or marine moved into Korea, seven measurement tons of supplies were

¹Zeis, p. 219.

²This is Marad, p. 9.

³Operation Steel Pike I Hearings, p. 81.

It is also noted that the Commission has not yet received the statement of the Commission's findings on the matter. The Commission is also noted to have received the statement of the Commission's findings on the matter.

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Conclusion

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Respectfully,
[Signature]

required to be shipped in for the initial support and a fresh ton of supplies was required every month for every man.¹ Thus, for a half-million man conflict as in the case of Viet Nam, three and a half million tons must be moved for the initial troop build-up and a half-million tons per month must be added, or nineteen-million tons of military cargo in the first year.

Table III shows that in 1966, the portion of our foreign trade carried in United States flag ships was expected to equal less than twenty-nine million tons. Thus, there would be little left of the merchant fleet to carry strategics, raw materials, or finished products to those free nations looking to the United States for defense and economic support.

Based on the military needs for shipping and the urgent requirements of the civilian economy under emergency conditions, a fleet of active ships plus reserve ships of adequate quality would be required as follows: 400 general cargo ships, each with a capacity of 600,000 bale cubic feet at 15 knots, 100 bulk cargo ships of 22,000 dead weight tons at sixteen knots, and 500 tankers of 115,000 barrel capacity at fifteen knots.² With the continuing trend and rate of decline in the size of our merchant fleet, by 1985, the United States will find it almost impossible to satisfy the military and economic needs with the United States flag merchant shipping alone.

The Military Sea Transport Service (MSTS) finds its origin in

¹Military Sea Transport Service, p. 380.

²The Merchant Marine in National Defense and Trade, pp.4-5.

the National Security Act of 1947, which instructed the Secretary of Defense to take steps to eliminate unnecessary duplication in the areas of procurement, supply and transportation. On 1 October 1949, MSTS was activated to make better use of military assets and provide better allocation of shipping between military and civilian needs.¹ MSTS functions much the same as a commercial carrier service. The responsibility for cargo begins when it is finally stowed on board and accepted by the ships' Captain, and ends when free on board at destination. The separate services are responsible for port operation including stevedoring.² A more important responsibility of MSTS is the administration of priorities for ocean shipping in accordance with the policies and guidance of the Joint Chiefs of Staff.³ MSTS has no authority to sponsor movements of either personnel or cargo and must be reimbursed for all services rendered.⁴

An agreement between the Secretary of Defense and the Secretary of Commerce executed in 1954, provides that after full use has been made of the MSTS active fleet, any further capability required will be purchased:

1. from berth line (point to point) shipping for less than ship load lots;
2. from voluntarily offered American-owned chartered ships for ship load lots;

¹Military Sea Transport Service, p. 11.

²Ibid., p. 14.

³Ibid., p. 19.

⁴Ibid., p. 36.

The National Highway Traffic Safety Administration (NHTSA) is the lead agency for the Department of Transportation (DOT) in the area of transportation safety. NHTSA is responsible for the development and implementation of the National Highway Traffic Safety Administration's (NHTSA's) safety program. NHTSA is also responsible for the development and implementation of the National Highway Traffic Safety Administration's (NHTSA's) safety program.

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Letter to Congress, October 1, 1971

10/1/71, p. 10

10/1/71, p. 10

10/1/71, p. 10

3. by operation of government-owned ships under general-agency agreements with the Maritime Administration and assigned to MSTs;

4. or when no United States flag shipping is available, foreign-flag ships may be used.¹

The size of the MSTs active fleet as of the end of the fiscal year 1965, was 183 ships, including forty-five United States flag commercial charter and six foreign flag.

The justification for having an MSTs in time of war is most apparent; however, its justification in time of peace must be looked at more carefully. Thru numerous and scattered worldwide defense commitments, the United States Armed Forces are spread out in most of the remote parts of the world. To support these forces, it is necessary to maintain a permanent logistic supply channel of support. Service of this type, requires ships to travel to places not normally served by regular merchant ship sailings that would be compatible with the military needs. In addition, this logistic support service requires that the delivery ships be outfitted with special cargo handling gear to move such things as sixty-ton tanks, helicopters, fixed wing aircraft, ammunition, etc.

The National Defense Reserve Fleet: Following World War II large quantities of excess merchant tonnage was placed in reserve, for the purpose of rapid reactivation in time of emergency.³

¹Steel Pike I Hearings, p. 69.

²McDowell and Gibbs, p. 207.

³Ibid., p. 415.

During three world crises since World War II these fleets have proven invaluable. The cost of keeping the NRDF since 1945 is estimated at between \$250-million and \$325-million. It is estimated that the NRDF activation in the Korean conflict saved the nation between \$2.5-billion and \$3-billion, and during the Suez crisis, about a half billion dollars.¹

The ships of the NRDF, for the most part, are in excess of twenty years old and at best have little life left beyond the next few years. Due to age and deterioration, the fleet declined by 500 ships since 1951, with a rapid decline of more than 300 ships between 1963 and 1965.²

In summary, the United States is dependant upon the Merchant Marine to support the industrial economy by sea lifting many raw materials which are not available except through importation. Since almost ninety-nine percent of United States trade moves by sea, United States flag merchant shipping contributes in the distribution of finished goods to the world market and can be an effective tool in controlling the United States lagging balance of payments.

In time of national emergency, the strategic objectives of the United States dictates there be in existence sufficient merchant shipping to promptly meet the sealift requirements in support of the nation's defense commitments.

¹Ferguson, pp. 455-456.

²Military Sea Transport Service, p. 214.

During both World War I and World War II, the merchant marine's capability had to be greatly increased in order to support the huge military needs of the Armed Forces. Thus following World War II, a sizable portion of retired wartime merchant shipping was placed in the National Defense Reserve Fleet, preserved for future mobilization to augment the active merchant marine if necessary in times of emergency. This reserve fleet was called upon in both the Korean and Viet Nam conflicts, however; age is rapidly overtaking any future usefulness of the NDRF.

The military Sea Transport Service operating a small nucleus fleet in peace time provides special logistic support to deployed military units in the remote corners of the world. In time of emergency, MSTS assumes the major mission of controlling and coordinating the flow of war material, sealifted by the merchant marine for the combat forces.

CHAPTER IV

THE STATE OF THE UNITED STATES

MERCHANT MARINE

As we move out of the 1960's and toward the prosperity forecast for the 1970's, the outlook for the United States Merchant Marine seems to have a dark cloud over it. The United States Merchant Fleet with less than 1,000 active ships totaling 14.5 million deadweight tons is shrinking at a rate of four percent per year.

The dual function served by the merchant marine, that of a service industry in peacetime, and an arm of the defense establishment in wartime, has led to uncertainty and confusion both in legislation and administration. As an industry, it is torn by special interest groups on both sides of labor and management. It has lagged far behind other industries in research and development. It is faced with the problem of block obsolescence of most of the World War II ships. For these and other reasons the maritime industry lacks attractiveness to private capital investment.

Inventory of Equipment

The oceangoing United States-Flag Merchant Marine, as of September, 1965, contained the following active ships:

THE JOURNAL

OF THE AMERICAN MEDICAL ASSOCIATION

PUBLISHED WEEKLY

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Published for the American Medical Association, 535 North Dearborn Street, Chicago, Ill.

Subscription price, \$5.00 per annum in advance. Single copies, 15 cents.

Entered as second-class matter, June 26, 1902, under post office number 336, at Chicago, Ill., under special agreement of post office and postmaster.

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Postpaid. Payment in advance.

The Journal is published for the American Medical Association, 535 North Dearborn Street, Chicago, Ill.

Editorial and business communications should be addressed to the Editor, The Journal, 535 North Dearborn Street, Chicago, Ill.

Advertisements should be addressed to the Business Manager, The Journal, 535 North Dearborn Street, Chicago, Ill.

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TABLE IV

ACTIVE, OCEANGOING UNITED STATES-FLAG
MERCHANT FLEET 1965

Types	Total No.	Gross Tons (Thousands)	Deadweight Tons (Thousands)
Combination Passenger/Cargo	26	390	229
Freighters	666	5,714	7,882
Tankers	257	3,847	6,213
Total	949	9,951	14,324

Source: United States Department of Commerce.¹

The total numbers in Table IV are useful in making comparisons with other nations such as the USSR. However, these totals include ocean vessels in domestic trade and do not include the inactive government owned National Defense Reserve Fleet of about 1,367 ships and ten million gross tons.

Of those vessels engaged in the merchant fleet's foreign trade, approximately three hundred are liners operating under operating-differential subsidy contracts. They are listed in Table VI to show size of the subsidized and liner fleet, as compared with the contract/bulk (irregular service) fleet.

¹U. S. Department of Commerce, Employment Report of U. S.-Flag Merchant Vessels of 1,000 Gross Tons and Over, September 30, 1965, (Washington; 1965).

TABLE V

UNITED STATES-FLAG OCEANGOING MERCHANT

FLEET IN FOREIGN TRADE, 1965

Types	No. Ships	Gross Tons (Thousands)	Deadweight Tons (Thousands)
Combination Passenger/Cargo	25	371	225
Freighters	406	3,510	4,900
Tankers	60	734	1,179
Sub Total	491	4,615	6,304
U. S. Agency Operation			
Freighters	96	843	1,122
Tankers	23	401	651
Total in Foreign Trade	610	5,859	8,077

Source: U. S. Department of Commerce¹

The groupings and figures in Table VI vary from day to day as titles are transferred to the government as partial payment on replacement vessels; or under charter arrangements to the government; or between subsidized and non-subsidized operators; or in transfers of flag to and from United States registry.

The National Defense Reserve Fleet of 1,367 vessels, ten million gross tons and thirteen million deadweight tons as of

¹Ibid.

September, 1965, must also be listed in an inventory of what the United States has available in merchant shipping.¹

TABLE VI

ACTIVE PRIVATE UNITED STATES-FLAG OCEANGOING

MERCHANT FLEET IN FOREIGN TRADE, 1965

Employment	No. Ships	Gross Tons (Thousands)	Deadweight Tons (Thousands)
Liners			
Combination Passenger/Cargo	25	414	248
Freighters	288	2,297	3,289
Sub Total	313	2,711	3,537
Tramps			
Dry Cargo & Bulk Carriers	118	930	1,200
Tankers	60	975	1,567
Total in Foreign Trade	491	4,616	6,304

Source: U. S. Department of Commerce²

The fleet was established by the Ship Sales Act of 1946, and in 1950, totaled 2,277 ships. It has provided a reservoir of ships, intended for quick activation or for ship exchange transactions. It has been used to augment shipping in the Korean War.

¹Ibid.

²Ibid.

Quality of Equipment in Service

The two hundred and ninety-five ships of the subsidized operators may be considered among the world's best. The approximately two hundred and eighty freighters of this category contain four times as many twenty-knot cargo liners as the rest of the world combined. It is this group of modern, efficient ships that carried forty percent of the total foreign trade carried by United States ships in 1964, including tramp and tankers' cargoes.¹ These ships are modern, some highly mechanized, and relatively new.

In the past seven years, a hundred and twenty-three ships have been replaced by new construction.² In 1964, thirty-seven of the thirty-nine ships under subsidized construction were being built with mechanized improvements,³ and twenty-seven ships were being considered for retrofitted mechanized features. These improvements include such features as bow thrust propellers, semi-automation of boilers, remote control and centralized control of engines and machinery, and the automatic logging and display of performance data, alarms and engine orders. The entire fleet of subsidized ships, about two hundred and ninety-five vessels, must, by contract be replaced by the late 1970's to insure their modernity.

All of the ships being built as replacements include mechanization features, which will permit crew reductions up to twenty-five

¹U. S. Department of Commerce, Annual Report of the Maritime Administration, 1964, p. 2.

²Ibid., p. 2.

³Ibid., p. 24.

percent.¹ Recent editions of the trade magazine of marine engineering, "The Engineering/Log" contain many references to the advances in mechanization and shipbuilding such as appeared with the delivery of the Louise Lykes, the first of twelve ships of a new class of cargo liners. She is the first American built trans-ocean liner to have a bow-thrust propeller unit and the first to have rotary-hinged hatch covers. She also demonstrates the increased use on American ships of inorganic zinc metal coatings and epoxies, which are intended to reduce labor costs for the continued, normal painting and maintenance upkeep.²

Another first in automated boiler control is recorded for the Washington Mail. This system permits the burning of low cost, low quality residual fuels and saves on manpower.³

There have also been some interesting proposals made which are under consideration. One proposal is for float-on-float-off barge carrying ships which offers the huge advantage of preloading of individual barges and assembling them for float-on to the barge ship. This would result in rapid, turn around time, and reduce port congestion.⁴

Another is the use of the two counter rotating propellers on a single shaft. This would allow high speeds on reduced horsepower. and, thus produce cost savings in reduced fuel consumption.⁵

¹Ibid.,

²Marine Engineering/Log Vol. LXX No. 11, October, 1965.

³Marine Engineering/Log Vol. LXIX No. 7, June, 1964.

⁴1965 Annual Report of the Maritime Administration, (Washington: U. S. Government Printing Office), 1966., p. 8.

⁵Ibid., 1967, p. 41.

The Act of 1936 is intended to subsidize operating expenses of liners in order to enable them to compete on equal terms with foreign vessels that have lower labor costs. The Act does not guarantee a profit to the liners, however, and the liner companies must sell transportation. They must market their services competitively and strive to operate efficiently, just as any other industry, in order to make a profit. Evidence of healthy activity in this competition is demonstrated by recent advertisements by subsidized liner companies for regular sailings of the newest innovation of containerships to North European ports.

On February 14, 1966, United States Lines advertised the first containership service to Europe, to commence March 18, 1966.¹ This would become a weekly sailing from New York with high speed crossings in six and a half days at twenty-one knots by four new, especially designed containerships. The appeal to the shipper in containerized cargo is for: (1) reduced handling costs, (2) elimination of pilfering and cargo protection, (3) reduced insurance rates, (4) reduced packing costs.

On February 17, 1966, the Moore-McCormack Lines were quick to follow with an advertisement in the press of their invitation for bids to construct four container, roll-on/roll-off cargo liners to cruise at twenty-five knots and sail to North European Trade routes.²

With regard to the approximately one hundred and eighty private tramp ships of dry cargo and tanker type in foreign

¹The Washington Post, February 14, 1966., p. G7.

²The Washington Post, February 17, 1966., p. A20.

trade, the quality is far from adequate. The contrast between these vessels and those of the liner service is vivid. These ships are largely World War II-built and now twenty years old or more. There are approximately thirty-six tankers engaged in overseas foreign trade and approximately one hundred and twenty tramp, dry cargo vessels.¹ The tankers are old, obsolete, and inefficient, surviving mainly by carrying dry bulk cargoes under the cargo preference program.²

The dry cargo vessels in irregular service are mainly old Liberty ships with some Victory and C-type hulls included. They are war-built, of relatively small capacity and inefficient as compared with modern bulk carriers. Their contribution to United States trade is examined in subsequent paragraphs.

Contribution to United States Foreign Trade

The contributions to foreign trade United States-flag merchant shipping is making will be listed in three categories, which are (1) overall percentage of United States foreign trade export and import carried by United States-flag ships, (2) percentage carried by subsidized lines, and (3) percentage carried in irregular service.

The volume of cargo carried by United States-flag vessels in United States foreign trade has declined and is demonstrated by the drop from sixty-five million tons in 1946 to thirty-five million

¹U. S. Department of Commerce, Employment Report of U.S.-Flag Merchant Vessels of 1,000 Gross Tons and Over, September 30, 1965.

²U. S. Department of Commerce, Maritime Administration, Changing Patterns in U. S. Trade and Shipping Capacity, (Washington: U. S. Government Printing Office, December, 1964)., p. 7.

tons in 1960. The total United States foreign trade carried by ocean vessels has grown from one hundred million tons in 1946 to two hundred and eighty-five million tons in 1960.¹

The decline in total cargo carried by United States-flag vessels in United States foreign trade is shown by percentages in Table VII.

TABLE VII

PERCENTAGE OF TOTAL CARGO BY VOLUME CARRIED BY U. S.-FLAG VESSELS IN U.S. FOREIGN TRADE, 1945 TO 1963

Year	Foreign Flag	U. S.-Flag
1945	32	68
1950	57	43
1955	70	30
1960	89	11
1963	91	9

Source: U. S. Department of Commerce²

When foreign trade is divided into imports and exports, the percentage, by volume, carried by United States-flag vessels in 1963 was fourteen percent of the imports and five percent of the exports.³

Still another way to assess the participation of United States-

¹U. S. Department of Commerce, Maritime Resources for Security and Trade. Final Report of the Maritime Evaluation Committee, (Washington, 1963) p. 2.

²U. S. Department of Commerce, Changing Patterns in U.S. Trade and Shipping Capacity, 1964.

³Ibid., pp. 4-13.

flag vessels in foreign trade is to categorize trade carriage by type of service. In this manner, in 1963, United States liners carried 29.2 percent of liner cargoes: United States-flag irregular service, dry cargo vessels carried 5.2 percent of dry cargo while United States-flag tankers carried 4.4 percent of tanker cargoes.¹

Liner Service

Of the total cargo in United States foreign trade carried by freighters in liner service, the United States-flag liners carried twenty-nine percent in 1963. This percentage has been quite constant for the past five years, ranging from 29.9 percent in 1959 to 27.3 percent in 1961. This trade has been stable in volume, also for the five year period 1959-1963, averaging about forty-seven million tons. Of this amount about thirty-six million tons is high revenue general cargo and eleven million tons is bulk commodities.²

In 1963, United States-flag liners carried thirty-one percent of the total liner exports and twenty-six percent of the total liner imports.³

Irregular Service

The tonnage of cargo carried in irregular service in United States foreign trade in 1963, by all nationalities, was 139.5 million tons, which was the highest volume on record at that time.

¹Ibid.

²Ibid.

³Ibid.

Department of Commerce projections for the 1965-1975 period show a sharp increase in this volume. For coal, the increase in ten years is projected as a rise of fifty million tons.¹ However, of the 139.5 million tons, United States-flag tramp ships and industrial carriers carried only five percent.

Tankers

In 1963, tanker exports from the United States totaled 13.9 million tons of which 6.9 million, about one half, were agricultural products and chemicals. Of this total, United States-flag tankers carried three million tons, (twenty percent of tanker exports) mostly agricultural products. United States-flag tankers in 1963 carried imports to the United States of 2.6 million tons (2.3 percent of tanker imports) virtually all of which was crude oil or petroleum products.²

Government-Sponsored Cargoes

The increases in total tonnages of irregular service cargoes and tanker cargoes in United States foreign trade serve to highlight the very small percentages which are carried by United States-flag vessels. However, the large share of government-sponsored cargoes United States-flag vessels obtain through the Cargo Preference Act tends to offset, financially, the poor showing of non-liner ships in free competition. It is probably that it is

¹Ibid.

²Ibid.

the government-sponsored cargo that keeps these vessels in business. The comparison shown in Table VIII shows this dependence graphically.

TABLE VIII

COMPARISON OF PRIVATE AND GOVERNMENT-SPONSORED CARGOES
CARRIED BY U.S.-FLAG VESSELS

Type of Service	U.S.-Flag Percent of Total Commercial U.S. Foreign Trade	U.S.-Flag percent of Government- Sponsored Cargo
Total Export- Import	8.5	57.4
Liner	29.2	69.1
Irregular	5.2	45.0
Tanker	4.4	63.5

Source: U. S. Department of Commerce.¹

Rate of Growth

The additions to the United States Merchant Fleet come either from new construction, transfers of registries, or activations (private or government) of ships of the National Defense Reserve Fleet (NDRF).

The number of ships built in American shipyards for the past five years is shown in Table IX, and the number of transfers from United States registry is appended. The effect is a net loss of United States-flag shipping.

¹U.S. Department of Commerce, Changing Patterns in U.S. Trade and Shipping Capacity, 1964.

TABLE IX
MERCHANT VESSELS CONSTRUCTED IN U.S. SHIPYARDS

Year	1960	1961	1962	1963	1964
Private (Non-subsidized)	11	7	3	5	4
Private (Subsidized)	9	17	24	26	11
Government Foreign Flag	2		1		
Total New Ships	22	24	28	31	15
Gains to U.S.-Flag	20	24	27	31	15
Transfer from U.S.-flag			81	41	56

Sources: (a) Annual Reports of U.S. Maritime Administration
(b) U.S. Department of Commerce¹

The best hope of additions to the American merchant fleet lies in the construction of liner-type vessels for the subsidized lines, as required by the contract program for operating-subsidies. Of the two hundred and ninety-four vessels required to be built, one hundred and twenty-three have been delivered, or are under construction.

However, the construction of the remaining one hundred and

¹(a) Annual Reports of U.S. Maritime Administration (1961 through 1964).

(b) U.S. Department of Commerce. This is MARAD.

seventy-one vessels will undoubtedly, be a slow process, to judge from the fiscal year 1967 budget, which provides for the construction of just thirteen new vessels as part of this continuing program.¹ This amount will add modernity to the fleet, but will not make up for the number of ships which are transferred.

There has been criticism of the speed at which the replacement program is progressing. American Export Isbrandtsen Lines chairman, Admiral John M. Will, is quoted by Marine Engineering/Log magazine as stating that we are sixty-six ships behind in the program, because the government has not provided the funds for its share of the construction costs. Construction of twenty-six to twenty-seven ships this year and each following year is advocated by the editorial staff of the Marine Engineering/Log.²

USSR Merchant Fleet

The United States' twenty new ships (335,000 deadweight tons) compares poorly with the gains of the Soviet Union, the world's most rapidly growing maritime power. The USSR is adding more than 1,000,000 deadweight tons annually through new ship construction in Russia, Poland, East Germany, Finland, Holland, Sweden, and Japan, and through ship purchases on the world market.

The Soviet Merchant Marine is state-owned and operated and quasi-military in nature. It has evolved from Lenin's decree of 1918, nationalizing the ships of Russian private shipping firms. In 1918,

¹Executive Office of the President, Bureau of the Budget, The Budget in Brief, Fiscal Year 1967, P. 39. (To be updated based on FY68 Budget).

²Marine Engineering/Log, Editorial, Vol. LXX, p. 11, October, 1965.

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this fleet amounted to only 865,000 deadweight tons.¹

In 1921, in order to foster the foreign trade urgently needed by the new Soviet nation, ships were purchased abroad, chartered, and a few built within the USSR. By 1931, Soviet ships carried ten percent of Soviet foreign trade. By 1957, however, the expanding Soviet-flag merchant fleet carried about fifty percent of all Soviet Union exports and imports.²

Today, the fleet available to the Soviet Union totals some eight million deadweight tons. The fact that the Soviet Union is committing significant resources and foreign exchange towards a growing merchant fleet shows her intention to penetrate the world trade routes and increase her trade with both communist countries and the free world.

By 1980 shipbuilding by Soviet bloc and western shipyards will, at present rates, provide the USSR with a fleet of over twenty million tons. This may prove to be the equivalent of the British Merchant Fleet and may be the largest, most modern fleet in the world, well able to dominate World trade.³

Project WALRUS Study

Project WALRUS, a 1959 summer study, was a principal function of the Maritime Research Advisory Committee of the National Academy

¹B. M. Kassell, "The Soviet Merchant Fleet," United States Naval Institute Proceedings, Vol. XXCVI, pl. 3, (March, 1960,) p. 71.

²Ibid.

³Noel Mostert, "Russia Bids for Ocean Supremacy," The Reporter, Vol. XXXIV, n. 3, (February 10, 1966).

This vessel was used to carry the first American flag.

It was in 1892 that the first American flag was carried to the North Pole.

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Following the first American flag was carried to the North Pole, the first American flag was carried to the North Pole.

Finally, the first American flag was carried to the North Pole.

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of Sciences--National Research Council in conjunction with the Maritime Administration on the "nature, organization, and prosecution of a scientific research and development program" appropriate to the Maritime Administration's objectives and responsibilities. The initially stated objective of Project WALRUS was: "To examine present and future military demands on the United States Merchant Marine in order that technical requirements can be derived for maritime research and development planning."

The scope of the Project was later broadened to encompass the national security role of the United States Merchant Marine; and a major demand was placed on the Merchant Marine by the intensifying-political-economic conflict, the cold war into which the United States has been inescapably drawn.¹

As a result of this study many old facts were confirmed. The key features of the study are summarized as follows:

- a. The United States Merchant Marine is deteriorating in that most of the ships are nearly over age and outmoded from the standpoint of modern design.
- b. United States flag shipping is carrying a steadily decreasing portion of United States trade (twelve percent in 1958--this percentage is even less today).
- c. The United States is in danger of losing its "flags of convenience" fleet which carries about one third of its foreign trade and over which the government is considered to now have

¹Panel on Wartime Use of the United States Merchant Marine, The Role of the United States Merchant Marine in National Security, (Washington: National Academy of Sciences-National Research Council, 1959), p. vii.

effective control.

d. The current rate of subsidy funding shows small promise of assuring timely replacement of the subsidized segment of the United States-flag fleet.

e. Most owners of non-subsidized United States-flag ships have little incentive for even starting a replacement program. This decline is of serious concern to the government, to industry, and most particularly to the military services.

f. Energetic leadership is required to correct the above trends.

g. The Merchant Marine should be prepared to plan a significant national security role.

h. The United States must use its Merchant Marine defensively and as a positive weapon of the cold war, to counter the economic thrusts of its opponents who are building stronger and larger merchant fleets to carry a larger share of international trade. The United States flag fleet is in danger of becoming unable to meet the challenge and the continued ability of the "flags of convenience" fleet to serve as an instrument of national policy is threatened.

i. United States flag shipping, augmented by the "flags of convenience" fleet, is adequate in quantity to meet reasonable expectations of defense needs, at least through 1965. The fleet in general, however, is qualitatively deficient for defense purposes because of inadequate speed, relatively low cargo-handling rates and lack of "over the beach" capability, coupled with obsolescence.

effective control.

4. The current rate of exchange between the dollar and the pound sterling is a function of the monetary policy of the United States.

5. The dollar is the only currency in the world which is not convertible into gold or silver. This is a function of the monetary policy of the United States.

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15. The dollar is the only currency in the world which is not convertible into gold or silver. This is a function of the monetary policy of the United States.

j. In the event of a general nuclear war, the Merchant Marine could play a vital role in rescue, rehabilitation, and restoration. It is likely to be the least damaged national transportation resource; however, this role should not dominate maritime planning. A foresighted, positive program to meet cold and limited war needs will go a long way toward producing an effective fleet for general war tasks.

k. National security maritime needs can be largely met by the construction and modernization of a fleet which can be commercially competitive with minimum subsidy. Both security and commercial interests can effectively use balanced speed in cargo handling and ocean transit, unitization of cargoes, and automation of ship operations to attain their goals. Such features entail capital intensification in order to reduce the number of man-days required to load, transit, and discharge the ship's load.

l. For national security purposes, the military services require a number of special ships having "over the beach" cargo handling capability. These ships may even prove effective in special commercial operations, such as meeting world competition in under-developed countries that have limited port facilities. Such utility as an instrument of national economic policy deserves thorough exploration.¹

The WALRUS Project concluded by citing three main steps which should be taken now to assure a strong merchant marine in support of national security needs. These were:

¹Ibid., pp. xi-xii.

Immediate action by the Government is required to avoid the flight of 'flags of convenience' shipping from effective U.S. control to uncontrolled registries under European flags. Some degree of exodus has already started.

The Government should be prepared to take the lead in enlisting the co-operation of maritime labor and management to produce a technologically feasible fleet which will be commercially competitive with minimum subsidy. Without significant improvement in the attitudes of both labor and management towards technological advances, we can achieve no sound basis for competitive objectives.

The goal of the Maritime Administration's Research and Development Program should be established as the creation of a U.S. merchant fleet which can be self-supporting without subsidy; and the Program should be so conducted as to lead rapidly to ships in being which demonstrate this possibility.¹

¹Ibid.

CHAPTER V

TRENDS FOR THE FUTURE

Economic

A declining seagoing fleet has been portrayed which, each year, carried less and less volume of the nation's commerce. Yet, at this same time of decline, signs of a hard-core of health and modernity is apparent in the form of the subsidized liner fleet. At the current rate of replacement, if continued, the United States-flag merchant fleet should stabilize at approximately two hundred and forty ships by 1980. By that time, the National Defense Reserve Fleet will have passed into complete obsolescence, and the United States-flag tramp and tanker fleets will have followed.

But, perhaps the picture is not that dark. The United States does possess, in its subsidized fleet, a firm foundation for merchant marine expansion, although the foundation, itself, depends on the enlightened implementation of the Merchant Marine Act of 1936. With this basis in material and policy, the United States can move ahead with a merchant fleet, which is balanced in type for the current cargo patterns, adapted to United States defense and commercial needs, and growing in its participation in United States and foreign trade.

Certainly the trends in United States foreign trade substantiate the continuing need for ocean transport. The Boyd Report contains a

trade projection based upon a United States Gross National Product (GNP) for 1985 of \$1,250-billion.¹ This projection shows both the value and the volume of ocean-borne foreign commerce doubling in the next 20 years. The volume projection shows a substantial change in the type of cargo to be carried with bulk cargo (dry and liquid) doubling while the volume of general cargo remains virtually steady.

TABLE X

VOLUME OF U.S. OCEANBORNE FOREIGN COMMERCE
(IN MILLIONS OF LONG TONS)

	1966	1975	1985
General Cargo	51	59	69
Dry Bulk Cargo	152	237	381
Liquid Bulk Cargo	136	175	235
Total	339	471	685

Source: Interagency Maritime Task Force Report²

Military Air/Sea Lift

In 1962, the Secretary of Defense convinced that passengers could be more effectively transported by air, recommended the deactivation of sixteen passenger ships operated by the Military

¹Alan S. Boyd, The Merchant Marine in National Defense and Trade, A Policy and a Program. by the Interagency Maritime Task Force under the direction of Alan S. Boyd, Under Secretary of Commerce for Transportation, October 4, 1965.

²Interagency Maritime Task Force Report, October 4, 1965.
Exhibit 1.

Sea Transport Service.¹ However, with the left capacity of present day aircraft movement of large numbers of people is costly.

A more meaningful cost comparison in military terms can be obtained from an examination of "Operation Big Lift" and "Operation Steel Pike I." Steel Pike was an amphibious exercise held in October, 1964, in which 28,000 Marines and 90,000 tons of cargo were transported in ten merchant ships and seven MSTs ships to Spain in ten days, landed ashore for four days' maneuvers, reembarked and returned to the United States.² The cost of the exercise was \$7 million.³ In October, 1963, Operation Big Lift moved 15,358 troops from Fort Hood, Texas to Germany in three days and later returned them to the United States for \$20 billion. In addition, all the equipment for Big Lift has been previously moved to Europe by ship and stored until needed.⁴

The C-5A aircraft, when placed into service in 1971, will have a capability to lift fifty tons of equipment or six hundred troops, its justification rests in its ability for quick response, not as a replacement for surface transportation of cargo.

To interface with the increased airlift capability of the 1970's, the Department of Defense has sponsored the development of a Fast Deployment Logistics ship (FDL). With huge roll-on/roll-off capability to handle military hardware plus an over the beach landing ability, the FDL along with the C-5A transport aircraft will

¹U.S. Congress, House, Hearings, Review of Merchant Marine Policy, 1962, 87th Cong. 2nd Sess. (Washington: U.S. Government Printing Office, 1962), p. 88.

²U.S. Congress, Operation Steel Pike I Hearings, p. 10.

³Ibid., p. 90.

⁴Ibid., p. 6.

represent a major improvement in immediate response to "brush fire" or relatively small limited-war operations. The existence of a substantial number of these new FDL ships will also reduce the number of conventional ships needed to sustain larger overseas operation. The FDL would be used as forward mobile depots stationed close to potential trouble areas, and loaded with military equipment required by airlifted combat forces. These ships would not be involved in point-to-point transportation operations except when they have discharged their cargo at a world trouble spot, they could be turned around and placed into service in the supply pipe line. Under no conditions would these ships be used to carry peace time cargo.¹

Although the program has the complete support of the Department of Defense and the Administration, it has generated substantial opposition from the maritime industry the shipbuilder's industry, and the maritime labor unions.

The cause of concern in the maritime industry and labor unions is the fear of competition in the movement of cargo, automated materials handling equipment and manning levels.²

The shipbuilding industry is totally against the proposed method of procurement that the Defense Department has endorsed.³

¹D. W. Wilson, Captain U.S.N. "A new Emphasis on Crisis". Navy the Magazine of Sea Power (May. 1965) pp. 11-14.

²Washington Star February 2, 1967, p. A16.

³Kelly, Orr, Capitol Coolness Dismays Backers of Logistics Ships Washington Sunday Star, April 16, 1967., p. A15.

In an effort to force modernization of ship construction methods, the intentions are to grant a single contract or total package approach covering all phases of the estimated twenty to thirty ship building project.

The major advantages of this form of procurement, according to the Department of Defense, would be standardization of ships and, thus, a reduction in the wide range of spare parts necessary to support the fleet. The second major reduction is in the construction costs. It is felt that multiple copy productions of ships would produce considerate cost savings.¹

Along with proposals for total package contracts on fourteen other types of ships, the shipbuilding industry is fearful that the fourteen major construction yards would shrink to five or seven highly automated shipyards. This fear and resistance is further increased because Department of Defense account for some eighty percent of all United States ship construction.²

The fiscal year 1968, Defense Department budget contained a request for five FDL ships, however, Congress, fearful of furthering the United States capability to become a "global policeman" may not approve this segment of the FDL program.³

Government Studies

Executive Order 11156 established the Maritime Advisory

¹Ibid.

²Washington Star. April 16, 1967. p. A15.

³The Wall Street Journal, March 22, 1967. p. 1.

Committee consisting of fifteen representatives of Maritime management, Labor, and the public. The Committee advises the Secretary of Labor and the Secretary of Commerce on matters of policy and administration for strengthening the trade, national defense, manpower and labor relations programs of the Maritime industry. At the duration of the Committee, an Interagency Maritime Task Force was formed in June, 1965, under the chairmanship of then Under Secretary of Commerce, Alan S. Boyd.¹

The proposed program would bring in some ships not now eligible for subsidy, would launch a new construction program of five bulk cargo ships a year, and would encourage the earliest automation of all United States vessels in both domestic and foreign trade.

The proposed changes would substitute direct, visible aids for most of the present indirect subsidies, and would streamline the aid systems to allow greater freedom of operation, more encouragement toward productive, profitable operation, and less detailed government interference.

It would halt the steady, year-to-year increase in subsidy spending, starting in 1966. If current programs were continued, the cost of maritime subsidy in 1966 would be \$416 million. Under the new proposal, the expenditure would be \$402 million.

At the end of the twenty-year-period, these savings would amount to about \$217 million a year. The Federal outlay in 1985 is set at \$377 million as against a total \$594 million which would be required

¹Boyd Report. pp. 7-44.

if present programs were continued.

A major share of these savings would come from a phase-out of passenger ship subsidies and gradual elimination of cargo preferences.

There are thirteen passenger liners currently under subsidy, representing an annual outlay of \$47 million.

The cost of the cargo preference program, under which United States shipping is guaranteed a percentage of Government-originated cargo, is reckoned in the hundreds of millions.

At the same time, the subsidy program would be extended to some ships not now included and would provide for a shipbuilding program that would bring in others.

Some forty unsubsidized cargo liners would become eligible, and a five-year construction subsidy program calling for five new dry bulk cargo ships a year would be instituted. This program would be reviewed and evaluated at the end of five years.

The Secretaries of Defense and Commerce would determine the level of private shipbuilding capacity required by national security considerations.

After contracts are let for that level of construction in domestic yards, American shipping companies would be free to build or repair ships abroad without subsidy support and without limitation as to the number of ships.

These ships would be eligible for all privileges of United States registry, and would be eligible for operating subsidies if they met the new requirements. This would include foreign-built vessels under five years old.

The annual merchant-marine-related Government spending in

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private shipyards amounts to \$152 million annually, or about five percent of the total Government input into the shipyard industry, for both military and civilian ship construction.

The proposal does not cover domestic shipping, but it would allow domestic shippers to buy ships or equipment in foreign yards also. The report noted that "domestic shipping is the only mode of domestic transportation required to purchase its equipment solely in the United States." Other modes such as airlines, trucks, rails, etc., do buy foreign-built equipment when it is to their advantage to do so, it added.

In the field of maritime labor, the program calls for application of maximum automation at as fast a rate as technology will permit, and establishment of manning scales at minimum levels consistent with safety and the advance of technology.

The report predicts that "over the next twenty years, under present programs, maritime labor may be confronted with a significant loss in the level of employment opportunity. The proposed program combats this trend and stimulates the industry's economic growth, thus creating new long term stable job potentials. The new program provides more future jobs than will present policies. It does this by encouraging increased productivity through fostering the application of new technology and manning standards."

The proposal suggests Government-participation in labor-management discussions seeking equitable settlement of employment and manning problems.

The report suggests such possible programs of adjustments as

graduated retirement, vesting of pension rights, severance pay and special automation funds.

Under the proposed program, the Maritime Administration would keep a close watch over participation by subsidized operators in shipping conferences, especially those which maintain unfair freight rates which tend to impede the flow of United States Commerce. Those receiving subsidy will, in fact, be encouraged to operate outside the conference setups where possible.

The phase-down and eventual elimination of cargo preference requirements is described as an integral part of the bulk carrier program feature.

The report predicts that with the disappearance due to age and deterioration of the tramp fleet, a modern bulk carrier fleet should emerge. This would eliminate the need for cargo preference and should have a bearing on the future job market in the maritime industry as world trade continues to expand and grow.

The United States' foreign commerce, based on the Council of Economic Advisors' predictions on the growth of the Gross National Product, could reach \$60 billion by the end of the twenty-year proposed program.

The Interagency Maritime Task Force Report was rejected in total by resolution of the President's Maritime Advisory Committee on the grounds that it was based on assumption contrary to the Merchant Marine Act of 1936.¹ Further, the release of the report brought cries of outrage (and still is) from all corners of the

¹U.S. Dept. of Commerce press release G-65-160, Oct. 7, 1965.

maritime industry, labor unions and the shipbuilders.¹

Most recent proposals from the new Department of Transportation, and being circulated informally within the maritime industry, recommend three basic steps be taken to improve the lot of the American Merchant Marine. The first calls for the Government to provide about \$200-million annually for five years in construction subsidies to build fifteen U.S. flag ships. These subsidies would be paid directly to the shipyards.

The second proposal would provide operating subsidies to foreign built bulk dry cargo ships and tankers. The third recommendation would allow foreign built U.S. flag merchant ships operate in U.S. Domestic trade.²

These proposals have been generally endorsed by the American Merchant Marine Institute (the nation's most powerful maritime industry association which represents almost half of the merchant shipping).³ The Committee of American Steamship Liners-(representing all but one of the nation's steamship lines) and three labor unions have also endorsed the Department of Transportation proposals.

¹Business Week March 18, 1967 pp. 173-176.

²The Wall Street Journal March 22, 1967, p. 3.

³American Merchant Marine Institute Press Information Letter dated March 20, 1967, for release on March 21, 1967.

⁴The Wall Street Journal March 22, 1967 p.3.

In summary, the Department of Defense appears to be determined to create a seelift and airlift completely responsive to very limited resources was wholly within the control of the Secretary of Defense.

An Interagency Maritime Task Force with representatives from; Bureau of the Budget, Council of Economic Advisor, Department of State, Defense, Agriculture, Labor and Commerce, prepared a program to foster a competitive merchant marine, balanced in type of ships for the cargoes expected in the future and subsidized only to the extent required to produce basic national defense needs.

The program was rejected, however, in its place there is emergency plans for modernizing the shipping industry within the frame work of the interest of the Mercant Marine Act of 1936.

CHAPTER VI

"SUMMARY"

The United States has always been a maritime nation and, at this moment in history, the sea is more important to Americans than ever before. The American foreign policy is more comprehensive and more far-reaching than ever before, and America is enabled by sea power to provide aid and protection to victims of aggression on a world wide scale. American industrial growth is more dependent than heretofore on raw materials supplied from abroad by the merchant vessel.

Government monetary assistance to ship operation has evolved through the years to culminate in the Merchant Marine Act of 1936 which, notwithstanding substantial promotional amendments, has not produced a growing United States-flag merchant fleet, composed "of the best equipped, safest and most suitable types of vessels". It was the imperative transoceanic transportation needs of World War II which impelled the shipbuilding program responsible for building the bulk of the present United States Merchant Fleet, and not the Act of 1936. Furthermore, since World War II, the United States-flag merchant fleet has declined in numbers of active ships and amounts of tonnage. It has declined drastically in the percentage of imports and exports carried in United States foreign trade until it now carries about 9.9 percent of the total. The unsubsidized ships in

irregular service and tank trade have shown the greatest decline. These ships would not be in operation today, if they did not have governmental assistance through cargo preference laws, which provide for preference being given to United States-flag vessels in the carrying of substantial amounts of government-generated cargoes.

As if to emphasize the United States Merchant Marine's decline is the remarkable growth of the merchant fleet, which is available to the Soviet Union. If the "Cold War" shifts or has shifted from power confrontations to coexistence and economic warfare, the USSR has the means in her merchant fleet to compete powerfully on a global scale.

Despite the decline in numbers and participation in United States foreign trade, the United States-flag merchant fleet has a vital and progressive element in the three hundred ships of the liner service. These ships are the subsidy construction and replacement ships which sail with an operating differential subsidy. They are modern, fast, safe ships, employing modern, mechanical, labor-saving devices. They can compete in an international environment only because of the governmental subsidies which offset the high costs of American labor. There is substantial proof of the need for government subsidy if the merchant fleet is to survive in its present environment. If present policies continue the United States-flag fleet will continue to decline until about 250 modern vessels remain, and these will not be in the right proportion, by type, to carry the increasing amounts of bulk cargo which trade predictions forecast for American trade. Further, the fleet will not, in the

future, provide the ships in numbers for a military contingency of any but the most limited type.

An increase of special airlift/sealift capability directly under the control of the Department of Defense points to less reliance on the Merchant Marine in future National Emergencies, short of an external war. The prevailing view of the administration spokesmen seems to be that free enterprise must have fostered, to the extent possible within the frame work of the national goals stated in the Merchant Marine Act of 1936.

Conclusion

Under current programs the strength and capability of the merchant marine relative to the expected volume of United States foreign trade, will continue to decline despite the aims of those programs.

Block obsolescence of merchant marine ships presents a procurement problem of greater magnitude than present procurement plans can satisfy.

The Merchant Marine Act of 1936, in effect, places the shipping and shipbuilding industries in a single subsidy base which makes the two industries interdependent upon one another.

The operating differential subsidy that now exists does not provide a strong enough incentive to operators for increased productivity and cost effectiveness.

United States shipping industry should be permitted to have ships constructed in foreign yards unless shipbuilding costs in the United States can be lowered noticeably.

It is difficult to justify having subsidies to an outmoded passenger liner fleet in the light of definite shortages in bulk dry cargo and wet cargo ship categories.

Labor and management should consolidate forces in both their houses and jointly strive to build a competitive industry or run the risk of expanded government intervention.

In spite of the fact the Boyd Report was totally rejected, it served one basic purpose, it twisted the tiger's tail and brought a solid front of reaction in way of complacency.

Recommendations

In order to develop a more economically effective Merchant Marine, it is recommended:

a) Definitive requirement for United States-flag shipping capability be developed and formed into a national Maritime policy.

b) The Merchant Marine Act of 1936 be amended to permit American shipping operations to:

1) Purchase foreign built ships for operation in the foreign trades under United States registry, and eligible for the same operation subsidies and benefits available to United States built ships.

2) Purchase foreign built ships for operation in domestic trade under United States registry.

c) That a study be made of the United States shipbuilding industry with a view toward reducing ship construction costs through modern large scale production techniques.

d) That the present operating differentials subsidy be modified to include incentive type subsidies based on effectiveness of productivity.

RECOMMENDATIONS

PROPOSED RECOMMENDATIONS

1. The Government should consider the following recommendations for the improvement of the operating differentials subsidy scheme:
 - a) The Government should consider the possibility of introducing a productivity incentive subsidy for those enterprises which have achieved a productivity increase of 10% or more over the base year.
 - b) The Government should consider the possibility of introducing a productivity incentive subsidy for those enterprises which have achieved a productivity increase of 5% or more over the base year.
 - c) The Government should consider the possibility of introducing a productivity incentive subsidy for those enterprises which have achieved a productivity increase of 2% or more over the base year.
 - d) The Government should consider the possibility of introducing a productivity incentive subsidy for those enterprises which have achieved a productivity increase of 1% or more over the base year.
 - e) The Government should consider the possibility of introducing a productivity incentive subsidy for those enterprises which have achieved a productivity increase of 0.5% or more over the base year.
 - f) The Government should consider the possibility of introducing a productivity incentive subsidy for those enterprises which have achieved a productivity increase of 0.2% or more over the base year.
 - g) The Government should consider the possibility of introducing a productivity incentive subsidy for those enterprises which have achieved a productivity increase of 0.1% or more over the base year.

BIBLIOGRAPHY

Public Documents

- U. S. Comptroller General, Audit of Federal Maritime Board and Maritime Administration, Department of Commerce and Predecessor Agency, (letter from Comptroller General of the United States, 82nd Cong., 1st Sess., House document 93); Washington: Government Printing Office, 1951.
- U. S. Congress, House. Committee on Merchant Marine and Fisheries. Cost of Becoming Competitive in Ocean Shipping. (89th Cong. 2nd Sess. Committee Print); Washington: Government Printing Office, 1966.
- _____. Hearings, Operation Steel Pike I. (89th Cong., 1st Sess.); Washington: Government Printing Office, 1965.
- U. S. Congress, House, Subcommittee on Merchant Marine of the Committee on Merchant Marine and Fisheries. Hearings, Review of Merchant Marine Policy 1962. (87th Cong. 2nd Sess.); Washington: Government Printing Office, 1962.
- U. S. Congress, Senate, Committee on Interstate and Foreign Commerce. The Merchant Marine Act, 1936, The Merchant Marine Sales Act, 1946, The Merchant Marine Act, 1920, The Shipping Act 1916 and the Merchant Marine Act 1928. (85th Cong. 1st Sess., Committee Print); Washington Government Printing Office, 1957.
- U. S. Congress, Senate. Merchant Marine Study and Investigation. (Report 2494 81st Cong. 2nd Sess.); Washington: Government Printing Office, 1950.
- U. S. Congress, Joint Economic Committee. Hearings, Discriminatory Ocean Freight Rates and Balance of Payments. (Parts 1, 2, and 3, 88th Cong. 1st Sess); Washington: Government Printing Office, 1963.
- U. S. Congress, SubCommittee on Federal Procurement and Regulation, Joint Economic Committee. The Import of Government Generated Cargo on U. S.-Flag Foreign Trade Fleet for the Calendar Year 1964. (89th Cong. 1st Sess., Committee Print); Washington: Government Printing Office, 1965.

U. S. Department of Commerce Maritime Administration. Maritime Resources for Security and Trade. Final Report of the Maritime Evaluation Committee. Washington: Government Printing Office, 1963.

_____. This is MARAD. Washington: Government Printing Office, 1965.

_____. Changing Patterns in U.S. Trade and Shipping Capacity. Washington: Government Printing Office, 1964.

_____. Employment Report of U.S. Flag Merchant Fleet Oceangoing Vessels 1,000 Gross Tons and Over as of September 30, 1965. Washington: Government Printing Office, 1965.

_____. Annual Report of the Maritime Administration, 1963; Washington: Government Printing Office, 1963.
(NOTE:) Also the reports for 1964-1965-1966)

_____. The U. S. Merchant Marine - A Brief History. Washington: Government Printing Office, 1954.

U. S. Department of Commerce. The Merchant Marine in National Defense and Trade, A Policy and a Program. Report of the Interagency task Force on Maritime Policy; Washington: Government Printing Office, 1965. (Boyd Report)

U. S. Department of the Navy, Bureau of Naval Personnel, Military Sea Transport Service; Washington: Government Printing Office, 1962.

U. S. Department of the Navy, Navy Material Command. The Fast Deployment Logistic Ship Project, Washington: 1966.

U. S. Maritime Commission, Handbook of Merchant Marine Development and Regulations in the United States, Washington: Government Printing Office, 1940.

U.S. President, Executive Office of the President, Bureau of the Budget. The Budget in Brief, Fiscal Year, 1967, Washington: Government Printing Office, 1966.

_____. The Budget in Brief, Fiscal Year, 1968. Washington: Government Printing Office, 1967.

U.S. Statutes at Large. Vols 41, 45, 49, 60 and 74.

Books

- Boczek, Boleslaw A., Flags of Convenience. Cambridge, Mass: Cambridge University Press, 1962.
- Ferguson, Allan R., et al. The Economic Value of the United States Merchant Marine. Evanston, Ill.: Northwestern University Press, 1961.
- Lewis, Elmer A., Laws Relating to Shipping and Merchant Marine. Washington: Government Printing Office, 1956.
- McDowell, Carl E. And Helen M. Gibbs, Ocean Transportation. New York: McGraw-Hill Co., 1954.
- Russell, Robert R., A History of the American Economic System. New York: Appleton-Century-Crofts, 1964.
- Zeis, Paul M., American Shipping Policy. Princeton: Princeton University Press, 1938.

Reports

- U..S. Department of Commerce, Office of the Secretary. Secretary Connor Announces Results of Maritime Committee Meeting. Press Release G-65-160 of October 7, 1965.
- U.S. Presidents, Maritime Advisory Committee. Maritime Policy and Programs of the United States. Report of the Public Members of the Subcommittee to the full Committee November 22, 1965 (revised November 27, 1965) (Mimeographed)
- Panel on Wartime Use of the U.S. Merchant Marine. The Role of the U.S. Merchant Marine in National Security. Washington: National Academy of Sciences, National Research Council, 1959, (Project WALRUS)
- American Merchant Marine Institutes, Inc. A New National Maritime Policy. New York: by American Merchant Marine Institutes, Inc. 1966.
- . Press Information Release of 1 P.M. Tuesday, March 21, 1967. New York, 1967. (AMMI position on key issues of Maritime policy).
- Committee of American Steamship Lines. Progress of the U.S. Liner Fleet under the Merchant Marine Act, 1936. Washington: by Committee of American Steamship Lines, 1964.

Committee of American Steamship Lines. U.S. Cargo Preference. Should the U.S. Government or Foreign Interests Control the Routing of U.S. Government Cargo? Washington: by Committee of American Steamship Lines, 1965.

Labor-Management Maritime Committee. Analysis of the Interagency Maritime Task Force Report; Section I, Implications of Projected Goods; Section II, Review of Substantive Features. Washington: by Labor-Management Maritime Committee, February 1, 1966.

Rapping, L.A., Federal Maritime Policy and Military Shipping Requirements. Santa Monica: The Rand Corporation, 1963.

Articles and Periodicals

Batcheller E. H., RADM, U.S. Navy., "Comment and Discussion", U.S. Naval Institute Proceedings., May, 1966.

Business Week, "New Strategies to Move Goods", September 21, 1966.

Business Week, "Transportation Swabbing Down the Merchant Fleet", March 18, 1967.

Clark, John J. and Margaret T. Norton., "The Merchant Marine: Subsidies and Competition", U.S. Naval Institute Proceedings. January, 1967.

Cook, Davidson E., "The MSTs Fleet - Unsung But Unexcelled", Navy: the Magazine of Sea Power., May, 1965.

DiBonn, Charles J., L.CDR. U.S. Navy., "Can We Modernize U.S. Shipbuilding", U.S. Naval Institute Proceedings. January, 1966.

Donaho, Glynn R., VADM U.S. Navy., "MSTS Has World Wide Tasks". Navy: the Magazine of Sea Power. May, 1965.

Frawson, A.F. Jr., Capt. U.S. Navy. "The Special Projects Ships", Navy: The Magazine of Sea Power. May, 1965.

Hayward, John T., VADM, U.S. Navy, "Comment and Discussion". U.S. Naval Institute Proceedings. May, 1966.

Hood, Edwin M., (President, Shipbuilders Council of America). "Comments and Discussion", U.S. Naval Institute Proceedings. May, 1966.

Kelly, Orr. "Capital Coolness Dismays Backers of Logistics Ships" The Washington Sunday Star. April 16, 1967.

Kendall, Lane C., "MSTS and the American Merchant Marine". Navy: The Magazine of Sea Power. May, 1965.

Marine Engineering/Log. August, 1956.

Marine Engineering/Log. March, 1957

Marine Engineering/Log. May, 1960.

Nakayama Sadayoshi, Admiral Japan Maritime Self-Defense Force (Retired) and Masataka Chihaya., "Japan's Phenomenal Ship-builders". U. S. Naval Institute Proceedings., August, 1966.

Noyes, Newbold. The Evening Star, Washington, D.C. February 2, 1967.

Sonensheim, Nathan. RADM U.S. Navy., "The Fast Deployment Logistic Ship Project - A New Approach to Ship Procurement". Naval Ship Systems Command Technical News. November, 1966.

Taylor, Frederick., "Shipbuilding Shift". The Wall Street Journal. March 22, 1967.

Trainor, James L., "Navy's Fast Deployment Ships Designed for U.S. Military, Economic Needs", Armed Forces Management. February, 1967.

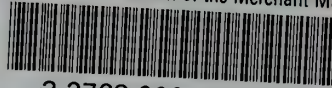
Wall Street Journal., "Boyd's Plan to Bolster U.S. Shipping is Backed by Key Industry Group". March 22, 1967.

Wilson, C.D., Capt. U.S. Navy., "A New Emphasis on Crisis - Time Readiness for the Military Sea Transportation Service"., Navy: The Magazine of Sea Power. May, 1965.

Wilson, George C., The Washington Post. January 29, 1967.

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